



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

ASAP

C45-12-4
Job Sheet 182721



JS

Part No: C45-12-4

Job Qty: 20 ea

Part Name: Lock Roller



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 8/30/18

Job Tracking No:

Due Date: 9/7/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG C45-12-4 REV 3 IPP REV A 18.02.14 NEW ISSUE FK VERIFY DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	20 Ea		9/7/18	0.00	0.00	Start Up Machining-4		JB 18-09-05
120	CNC Lathe	20 pcs		9/7/18	1.00	2.00	MORI SL-154		JB 18-09-05
130	QC	20 pcs		9/7/18	0.00	0.00	QC2 Machining-5		JB 18-09-05
140	QC	20 pcs		9/7/18	0.00	0.00	QC8 Machining-5		JB 18-09-10
150	Outsource	20 pcs		9/7/18	0.00	0.00	Outsource1 (Atlantic)		CC 18-9-11
180	Outsource	20 pcs		9/7/18	0.00	0.00	Outsource15		CC 18-9-17
190	Packaging	20 pcs		9/7/18	0.00	0.00	Packaging2		SEP 21 2018
200	QC	20 pcs		9/7/18	0.00	0.00	QC6		SEP 21 2018
210	Packaging	20 pcs		9/7/18	0.00	0.00	Packaging3		SEP 21 2018
220	QC21-SA	20 Ea		9/7/18	0.00	0.00	QC21		SEP 21 2018

Part Op 120 - 1-Machine as per folio FC331 FOLIO REV: _____ DWG REV: _____ 2-Deburr

Descriptions: 150 - 1--Issue P/O to Metcore ; P/O 040973 RC 53-56 2-Bead blast 3- Certificate of Conformity is required

Atlantic ***NOTE*** DROP SHIP TO FINISHER Metcore to ship directly to Groupe Altech or ATG***

180 - -Issue P/O to Groupe Altech: P/O 040973 Nickel plate, QQ-N-290, Class 2, Grade E or F -Nickel Plate .0004-.0006 - Certificate of Conformity is required

190 - Receive

200 - ***MEASURE DIMENSION 0.500"-0.000"/ +0.003"***

210 - Identify and Stock

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MT-4140QT-R1.000	AISI 4140 Quenched & Tempered Steel Round Bar 1.000"	1.3400 ft (.067 ea)	90-Start up Operation	

Operation

90-Start up Operation

Component P

MT-4140QT-R

Specifi



Container No: S108073



Part: C45-12-4

Job No: 182721

Serial No/Batch: S108073

Revision: 3

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 09/05/18

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

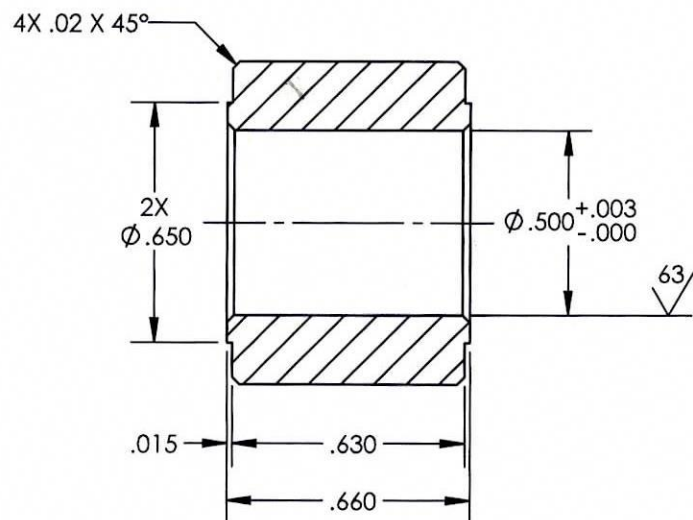
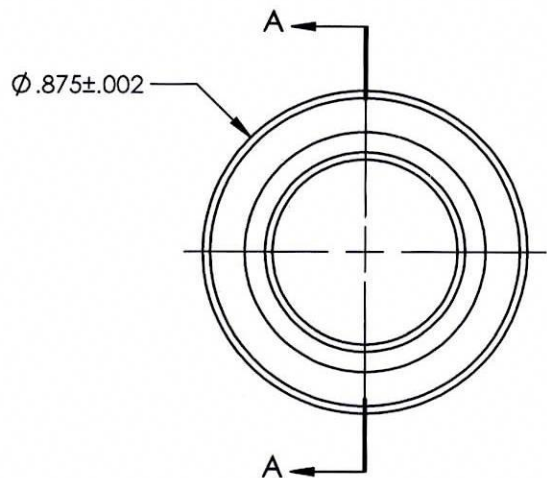
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2		AS DRAWN BY CANAM.	9/12/2012	RJC	
2A	14-0127	CH'D TITLE BLOCK WAS RED BARN IS DART. ADDED BAG & LABEL NOTE. DELETED DIM (.015).	8/14/2014	DPD	RW
3	15-0035	CH'D MAT'L WAS S7 IS 4140/4142.	2/11/2015	DPD	JAG



SECTION A-A



NOTES:

1. NICKEL PLATE .0004 - .0006, BAKE AFTER PLATING.
2. BAG & LABEL WITH BATCH NUMBER.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 182639

DART AEROSPACE	
TITLE LOCK ROLLER	
DWG NO. C45-12-4	REV 3
MAT'L 4140/4142	DRAWN BY: CANAM
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED <i>D West</i>
.XXX ± .005 FRACTIONS ± 1/8	HEAT TREAT RC53-56
.XX ± .01 ANGLES ± .5°	FINISH SEE NOTE 1
.X ± .1	SPEC
1. BREAK ALL SHARP EDGES .015 x 45° OR .016R	USED ON MODEL
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE 2:1	DATE 10/28/1998 SHEET 1 OF 1

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS
			C45-12-4	1	LOCK ROLLER	4140/4142	Ø7/8 X 3/4



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040973**

Supplier: ATL002-VC
Atlantic Heat Treat 2001
401 Frankcom
Ajax
ON
L1S R14 Canada
Phone: 866 257 6395

PO No: PO040973
PO Date: 9/11/18
Due Date: 9/21/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Phone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	182721	C45-12-4	Lock Roller 1-Issue P/O to Atlantic; P/O _____ RC 53-56 2-Bead blast 3- Certificate of Conformity is required ***NOTE*** DROP SHIP TO FINISHER Atlantic to ship directly to Groupe Altech***	Firmed	-	9/21/18	25 pcs	0 pcs	25 pcs	\$3.00/pcs	\$75.00

25 X SEP 17 2018

Line Item Note ** rush **

Grand Total: \$75.00

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 9/17/18 12:43 PM dart.tsimiklis.chrisoula

Atlantic Heat Treating (2001) Ltd

Order No.: 158430

Ship Date: 13/9/2018

Shipping Ticket

Sold To: 1448
DART AEROSPACE LTD.
 1270 ABERDEEN ST
 HAWKESBURY ON K6A 1K7

Ship To: 155580
DART AEROSPACE LTD.
 1270 ABERDEEN ST
 HAWKESBURY ON K6A 1K7

Page 1 of 1

Purchase Order Number	Packing List No	Customer Job No	Route	Carrier
PO040973				

Quantity	Part No. / Part Name / Part Description	Pounds
	25PCS MATERIAL 4140 HEAT TREAT TO 53-56RC WITH SAND BLAST C OF C ,PRT# C45-12-4, JOB# 182721	

Container Type	# Of Containers	Cust Cont Id	Container Type	# Of Containers	Cust Cont Id
BOX	1				

NOTICE: OUR LIABILITY IS LIMITED TO OUR INVOICE CHARGES ONLY

Shipped Complete

Quantity Shipped:

25

Pounds Shipped:

2.00

53 RC

9-14-18

Order No.: 158430

Shipped Complete

Quantity Shipped:

25.00

Received By:

Date:

Pounds Shipped:

2.00

Sold To: DART AEROSPACE LTD.

Shipped ON: 09/13/2018

Certification

Date: 09/14/2018

Entry Date: 09/13/2018

Page: 1 of 1

To:DART AEROSPACE LTD.
1270 ABERDEEN ST

Purchase Order No.: PO040973

Packing List No.:

HAWKESBURY ON K6A 1K7

Material: 4140

We are pleased to provide you with the following Certificate of Compliance.

Quantity	Part Number / Part Name / Part Description	Pounds
25	25PCS MATERIAL 4140 HEAT TREAT TO 53-56RC WITH SAND BLAST C OF C, PRT# C45-12-4, JOB# 182721	2

Insp. Type	Scale	Minimum	Maximum	Number	Other
------------	-------	---------	---------	--------	-------

Customer Requirements:

Harden rockwell

Results:

Harden ROCKWE 53. 56. 53. TESTED AS PER SAMPLING PLAN

HEAT TREATED TO 53 RC AS PER CUSTOMER REQUEST

STATEMENT OF LIMITED LIABILITY (PLEASE READ CAREFULLY). ALL WORK IS ACCEPTED SUBJECT TO THE FOLLOWING CONDITIONS. It is recognized that even after employing all the scientific methods known to us, hazards still remain in metal treating. THEREFORE, OUR LIABILITY SHALL NOT EXCEED TWICE THE AMOUNT OF OUR CHARGES FOR THE WORK DONE ON ANY MATERIAL (FIRST TO REIMBURSE FOR THE CHARGES AND SECOND TO COMPENSATE IN THE AMOUNT OF THE CHARGES), EXCEPT BY WRITTEN AGREEMENT SIGNED BY THE METAL TREATER. THE CUSTOMER, BY CONTRACTING FOR METAL TREATMENT, AGREES TO ACCEPT THE LIMITS OF LIABILITY AS EXPRESSED IN THIS STATEMENT TO THE EXCLUSION OF ANY AND ALL PROVISIONS AS TO LIABILITY ON THE CUSTOMER'S OWN INVOICES, PURCHASE ORDERS OR OTHER DOCUMENTS. IF THE CUSTOMER DESIRES HIS OWN PROVISIONS AS TO LIABILITY TO REMAIN IN FORCE AND EFFECT, THIS MUST BE AGREED TO IN WRITING, SIGNED BY AN OFFICER OF THE TREATER. IN SUCH EVENT, A DIFFERENT CHARGE FOR OUR SERVICES REFLECTING THE HIGHER RISK TO TREATER, SHALL BE DETERMINED BY THE TREATER AND CUSTOMER. THE TREATER MAKES NO EXPRESS OR IMPLIED WARRANTIES AND SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF THE FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, AS TO THE PERFORMANCE OF CAPABILITIES OF THE MATERIAL AS HEAT TREATED, OR THE HEAT TREATMENT. THE AFOREMENTIONED LIMITATION OF LIABILITY STATED ABOVE IS SPECIFICALLY IN LIEU OF ANY EXPRESS OR IMPLIED WARRANTY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS, AND OF ANY OTHER SUCH OBLIGATION ON THE PART OF THE TREATER. No claim for shortage in weight or count will be entertained unless presented within five (5) working days after receipt of materials by customer. No claim will be allowed for shrinkage, expansion, deformity, or rupture of material in treating or straightening, except by prior written agreement, as above, nor in any case for rupture caused by or occurring during subsequent grinding. Whenever we are given material with detailed instructions as to treatment, our responsibility shall end with the carrying out of those instructions. Failure by a customer to indicate plainly and correctly the kind of material (i.e., proper alloy designation) to be treated, shall cause an extra charge to be made to cover any additional expense incurred as a result thereof, but shall not change the limitation of liability stated above. Customer agrees there will be no liability on the treater in contract for any special, indirect or consequential damages arising whatsoever, including but not limited to personal injury, property damage, loss of profits, loss of production, recall or any other losses, expenses or liabilities allegedly occasioned by the work performed on the part of the treater. It shall be the duty of the customer to inspect the merchandise immediately upon its return, and in any event claims must be reported prior to the time that any further processing, assembling or any other work undertaken. OUR LIABILITY TO OUR CUSTOMERS SHALL CEASE ONCE ANY FURTHER PROCESSING, ASSEMBLING OR ANY OTHER WORK HAS BEEN UNDERTAKEN ON SAID MATERIAL. No agent or representative is authorized to alter the above conditions, except by writing duly signed by an officer of treater.

KEAN SHEPHERD
QUALITY CONTROL
ATLANTIC HEAT TREATING 2001 LTD



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041041**

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO041041
PO Date: 9/17/18
Due Date: 9/21/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Tsimiklis, Chrisoula
Phone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 60
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	182721	C45-12-4	Lock Roller -Issue P/O to Groupe Altech: P/O -Nickel plate, QQ-N-290, Class 2, Grade E or F -Nickel Plate .0004-.0006 - Certificate of Conformity is required	Firmed	-	9/21/18	25 pcs	0 pcs	25 pcs	\$4.80/pcs	\$120.00

Line Item Note ** rush **

Grand Total: \$120.00

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 9/18/18 1:07 PM dart.tsimiklis.chrisoula

CT.



Certificat de Conformité / Certificate of Compliance

(012763-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

012763 - 1

Livré à / Ship to

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD

1270 ABERDEEN STREET

HAWKESBURY, ON, K6A1K7

CANADA

BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
21-Sep-2018		Aman		041041 ✓				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ Nz Qty	Qté Scrap/	À venir/ Back Order
1	C45-12-4 ✓ Rev.	C45-12-4 01 - E-NIC STEEL 200 [E-NICKEL STEEL 200] QQ-N-290 CLASS 2 GRADE E OR F 0.0004-0.0006 THICK	E-NICKEL STEEL CH	25	25 ✓	0	0	0

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.